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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,799

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John W. Peel

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02/23/2006

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EXAMINER

BLOUNT, ERIC

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,799

Applicant(s)

PEEL ET AL.

Examiner

Eric M. Blount

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-18, 20-27, and 32 is/are rejected.
- 7) ☒ Claim(s) 28-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. The Office acknowledges the amendment made by applicants to include a reference to the prior application in first sentence(s) of the specification of this application.

Response to Arguments

2. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. **Claims 12 and 21** are objected to because of the following informalities: Applicants use the word "remove" on line 6 of each claim. It appears that the word "remove" should be replaced with the word "removal(s)". Appropriate correction is required.
4. **Claims 28-31** are objected to because of the following informalities: On lines 7 and 8 applicant states "at least one of a satellite communication adapter and a radio communication adapter". Later in the claim, applicant states that if communication cannot be established using one of the adapters, the other adapter is used. The latter limitation suggests that applicant includes both a satellite communication adapter and a radio communication adapter, not at least one of the two. If the two adapters are indeed included (one as a backup), applicant is advised to amend the claim to read as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner [Pub No. US 2004/0174260 A1] in view of Breed [U.S. Patent No. 6,919,803 B2].

With regards to **claim 1**, Wagner discloses a shipping container tracking system comprising at least one shipping container sensor adapted to be attached to a first shipping container to sense a condition of least one item within the first shipping container. The shipping container has a communication adapter to adaptively communicate with a second shipping container (paragraphs 10, 30, and 37). Wagner does not disclose at least one sensor for sensing a condition of a shipping container.

In an analogous art, Breed discloses a shipping container tracking system comprising at least one shipping container sensor adapted to be attached to a first shipping container to sense a condition of the first shipping container and a condition of at least one item within the first shipping container (column 10, line 40-column 11, line 36). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify the invention of Wagner to include the door sensor means taught by Breed because the modification would result in a more secure container tracking system. Including the door sensors would allow monitoring

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personnel to determine when the doors of a container had been opened and closed and if a possible security breach had occurred.

As for **claim 2**, the tracking system may comprise at least one of a satellite communication adapter and a radio adapter (paragraphs 37 and 48).

As for **claims 3 and 6**, the shipping container communication adapter connects the first shipping container to an Ad-Hoc network (paragraph 37 and Figure 2).

Regarding **claims 4 and 5**, Wagner does not specifically disclose that the Ad-hoc network in the invention is a Bluetooth, UWB, or Wi-Fi network. However, one of ordinary skill in the art would have recognized that the use of Bluetooth, UWB, or Wi-Fi to establish an ad-hoc communications network was well known in the art. The use of the any one of these low-power communications networks would have been obvious because of their availability and familiarity to one of ordinary skill in the art. Further, Breed discloses communication using Bluetooth, Wi-Fi or other protocols (column 13, lines 34-38). As for the use of a hard-wired network, this can be viewed as a matter of design choice.

As for **claim 7**, Wagner discloses that a radio adapter on a shipping container can communicate on a cellular communications network (paragraphs 51 and 52).

As for **claims 8 and 9**, Wagner discloses that a central location receives sensor data from at least one shipping container (paragraphs 53-54). Wagner does not specifically disclose that a central database is present. However, it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant that a memory of some sort be present at the central monitoring station. The monitoring station would have to have a memory to compare the content or conditions presently in a shipping container with those that were in the container

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before shipment (paragraphs 55-57). Comparing sensor data to thresholds and predetermined values reasonably appears to meet the limitation of verifying the contents of the first shipping container by processing the condition of the first shipping container against a manifest database (paragraphs 50, 51, 57, and 109).

7. Claims 11-18 and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner, as applied to the claims above, in view of Woolley et al [U.S. Patent No. 5,774,876].

With regards to **claims 11 and 20**, Wagner discloses a method of distributing data obtained from sensors adaptively attached to a shipping container comprising, establishing a network connection between a first shipping container and a second shipping container. Sensor data will be transferred from a first shipping container to a second shipping container when the first shipping container is unable to transmit data directly to an off ship transmission path and a shipboard system (paragraphs 10 and 43). The data transfer will take place whether hazard detection occurs or not.

In an analogous art, Woolley discloses a method of distributing data obtained from sensors adaptively attached to a shipping container comprising establishing a network between a first shipping container, second shipping container, and a vehicle driver cabin. Relevant information is sent through the tags to the driver. The driver's cabin is the equivalent of a ship's bridge. Hazard detection is considered relevant information that would be communicated to driver (column 18, lines 5-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Wagner to include a monitoring station

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(vehicle cabin/ship's bridge) located on the vehicle so that a driver would be able to ascertain hazard conditions and take the appropriate actions for correcting the problem.

As for **claims 12 and 21**, Wagner discloses a means for reforming a network. This means allows the system to add and remove containers from the network (paragraphs 42-44). One of ordinary skill in the art would recognize would have recognized that reforming the network would involve detecting and/or monitoring the path of radio signals between the first and second shipping containers.

As for **claims 13 and 22**, sensor data from a second shipping container can be transferred to at least one of a satellite data path, radio data path, and a shipboard system (paragraph 37). Paragraph 37 shows that sensor data may be relayed to other containers using a radio data path.

As for **claims 14, 16, 23, and 25**, the shipping container communication adapter connects the first shipping container to an Ad-Hoc network (paragraph 37 and Figure 2).

Regarding **claims 15, 17, 24, and 26**, Wagner does not specifically disclose that the Ad-hoc network in the invention is a Bluetooth, UWB, or Wi-Fi network. However, one of ordinary skill in the art would have recognized that the use of Bluetooth, UWB, or Wi-Fi to establish an ad-hoc communications network was well known in the art. The use of the any one of these low-power communications networks would have been obvious because of their availability and familiarity to one of ordinary skill in the art. As for the use of a hard-wired network, this can be viewed as a matter of design choice.

As for **claims 18 and 27**, Wagner discloses that a radio adapter on a shipping container can communicate on a cellular communications network (paragraphs 51 and 52).

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8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over He et al [U.S. Patent No. 6,995,667 B2]

As for **claim 32**, He discloses a shipping container for use in a shipping container tracking system comprising a shipping container housing, a satellite transmitter on the shipping container housing; or a radio transmitter on a side of the shipping container housing, and a GPS receiver located on the shipping container housing (column 3, lines 28-43). He discloses that the transmitters may be located at various locations on the shipping container. It would have been obvious to one of ordinary skill in the art to place the components at locations that provided optimum communication links. He shows in column 6, lines 39-45 that a satellites and/or radio transmitters may be attached to the shipping containers. Further, He teaches that the communications devices (transmitters) may be presented in a modular form so that they are interchangeable (column 10, line 64 – column 11, line 13). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant that each container could be provided with various communication devices located at various positions on the shipping container. A skilled artisan would have recognized (as suggested by He) that the use of a communications devices and their location would be determined by the system in which the devices would be used.

Allowable Subject Matter

9. **Claims 10 and 19** are allowed. The following is a statement of reasons for the indication of allowable subject matter:

a. Regarding claims 10 and 19, the prior art of record fails to sufficiently describe or suggest a shipping container tracking system comprising a line of intermediate communications buoys placed at sea at appropriate locations to at least one of test the container tracking system functionality and to detect anomalies at a safe distance from port facilities. These along with other limitations render the claims allowable over the prior art.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M. Blount whose telephone number is (571) 272-2973. The examiner can normally be reached on Monday-Thursday 8:00 am - 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric M. Blount
Examiner
Art Unit 2636


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